PATENT
Docket No. 532412000100

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In the application of:

James COLEMAN

Serial No.: 10/056,000

Filing Date: January 28, 2002

For: WATER FEATURE

Examiner: Vit W. Miska

Group Art Unit: 2841

APPELLANT'S OPENING BRIEF

MS Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

Sir:

This is a timely appeal from the final rejection of claims 1-8 and 16-19 in this application.

I. REAL PARTY IN INTEREST

The real party in interest is appellant James Coleman. This application is not assigned.

II. RELATED APPEALS AND INTERFERENCES

There are no related appeals or interferences within the meaning of 37 CFR 41.37(c)(1)(ii) known to appellant or his undersigned counsel.

III. STATUS OF CLAIMS

Claims 1-20 are pending in this application. Claim 15 is allowed. Claims 9-14 and 20 are objected to as depending from a rejected claim but are otherwise allowable. Appellant amended claims 8 and 14 in a preliminary amendment filed with this application but has not

otherwise amended the claims. Claims 1-8 and 16-19 stand finally rejected under 35 USC 102(b).[1]

Appellant appeals the final rejection of claims 1-8 and 16-19. The appealed claims are reproduced in the attached Appendix.

IV. STATUS OF AMENDMENTS

There are no pending amendments to the appealed claims.

V. SUMMARY OF CLAIMED SUBJECT MATTER

The invention of the appealed claims is directed to a dynamic ornamental water feature, particularly to one that gives an indication of time, and to a method of operating such a water feature.[2] The claimed water feature includes a vessel for containing a volume of water and having a body (referred to as inner tube 3 in the first embodiment), a water inlet tangential fill port 6 and a water outlet or drain port 7. Fig. 1a; Page 9, lines 5-9. The water inlet or fill port 6 is arranged substantially tangentially to the inner tube or body 3 of the vessel in order to impart rotational movement to the volume of water in the vessel when the water is supplied to the water inlet by virtue of its location at the outer edge of the inner tube 3. See also, page 3, lines 16-18, which explain that a vortex is generated and maintained by pumping water tangentially into the bottom of the vessel. The drawing figures also show the profile of vortex of water 10 generated by the tangential introduction of water as claimed. The vortex has an air column in its central region, and has a height that varies as the input pump rate and the outlet drain rate are varied. Page 3, lines 23-27.

The claimed water feature also includes a controller, depicted in Fig. 1a for example as controlling tube 11 within drain port 7 controlled by electronic control means 27, for controlling

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[1] Appellant reserves the right if necessary to submit an amendment on remand to put claims 9-14 and 20 into independent form, putting claims 9-15 and 20 in condition for allowance on remand.

[2] This summary explains to the Board the subject matter of the broadest of the appealed claims so that the important overall distinctions between the invention and the prior art are apparent without explaining details of the specific operation of appellant's invention.

the rate of water inlet to the vessel in comparison to the rate of water outlet from the vessel so as to vary the height of the volume of water in the vessel. To achieve a faster rate of drain, inner tube drain bypass valve 14 may be opened. Page 9, lines 18-28. That is, when the amount of water flowing into the vessel exceeds the amount flowing out, the water level of the vortex rises, when the amount of water flowing out of the vessel exceeds the amount flowing in, the water level of the vortex falls, and when the amount of water flowing into the vessel equals the amount flowing out, the water level of the vortex remains constant. Page 3, lines 13-19. When used as a clock, appellant's water feature includes a timing device 28 for the controller so that the height of the volume of water in the vessel can be varied over a predetermined period of time, for example between a minimum height and a maximum height over a predetermined period of one hour. The dynamic nature of appellant's water feature arises from appellant's control of water column height based on water inflow and water outflow in order to show the presence of a dynamic condition, such as time, by means of the water column height.

Appellant's invention also relates to a method of operating a water feature that includes at least one vessel containing a volume of water, including the steps of causing the volume of water to rotate about an axis of the vessel so as to form a vortex in the vessel and causing the volume of water to vary in height over time. In this method, water may be continuously introduced to and drained from the vessel so the rate of introduction of the water into the vessel exceeds the rate of draining when the height of the water volume is to increase and the rate of draining exceeds the rate of introduction when the height of the water volume is to decrease. By doing this, the height of the rotating volume of water varies over a predetermined period of time so as to provide an indication of the time.

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Appellant requests review of the following grounds of rejection:

(1) Claims 1-4 and 7 under 35 USC 102(b) on Hess;

(2) Claims 1, 5 and 6 under 35 USC 102(b) on Sonnweber; and

(3) Claims 8 and 16-19 under 35 USC 102(b) on Koenig.

VII. ARGUMENT

A. Introduction

During prosecution, appellant recognizes that the Office gives application claims their broadest reasonable interpretation in light of the specification. *In re Crish*, 393 F.3d 1253, 1257 (Fed. Cir. 2005), citing *In re Morris*, 127 F.3d 1048, 1055 (Fed. Cir. 1997). In doing so, the Office, and thus the Board, must give effect to all of the language in the claims under consideration and must impart to that language the meaning it had as of the effective filing date of the application. *Phillips v. AWH Corp.*, 415 F.3d 1303, ____ (Fed. Cir. 2005) (*en banc*). Having done that, to affirm an anticipation rejection "the Board must compare the construed claim to a prior art reference and make factual findings that 'each and every limitation is found either expressly or inherently in [that] single prior art reference.'" *In re Crish* at 1256, citing *Celeritas Techs. Ltd. v. Rockwell Int'l Corp.*, 150 F.3d 1354, 1360 (Fed. Cir. 1998). In construing the claims on appeal, the Examiner erred as a matter of law in ignoring or not giving a reasonable meaning to limitations in appellant's claims and then erred in finding that the cited references anticipate appellant's claims.

B. The Examiner's claim interpretation is legally erroneous because it does not impart the broadest reasonable interpretation to all of the words of the rejected claims.

In paragraph 7 of the final Action, the Examiner interpreted the claim term "tangentially," allegedly in light of the specification of this application, to mean nothing more specific than "arranged in the vicinity of or along the vessel body." The Examiner's position is based in part on the Examiner's belief that the specification does not disclose an embodiment that meets what the Examiner considers to be the geometrical meaning of "tangential," touching at one point but not intersecting. This position truncates the language of the claims by ignoring explicit claim language and imparts a meaning to "tangentially" that is not reasonable on this record.

First, the definition the Examiner gives "tangential" is not in accordance with its ordinary meaning as a matter of geometry. "Tangential" does not mean "in the vicinity of *or* touching" (emphasis added), as alleged on page 5 of the final Action. More accurately, as the Examiner seems to recognize on the same page of the final Action, "tangential" means "touching and not intersecting a curve or curved surface at only one point." *Webster's New World Dictionary* 1453 (2d College ed. 1980). The term "tangential" thus does not carry any connotation of being "in the vicinity of" the line or surface to which another line or curve is tangential; the lines or curves must touch.

Second, claim 1 states that the water inlet is located "tangentially to the body of the vessel ***so as to impart rotational movement to the volume of water***." (Emphasis added.) In other words, the structure claimed by appellant in claim 1 requires the tangential location of the water inlet in such a place that the introduction of water through the inlet located as claimed will impart rotational movement to the water. Doing that produces the result of vortex 10 as shown in the drawings. The Examiner's interpretation gives no meaning whatever to the emphasized words of claim 1 and is thus not reasonable on that ground.

Third, the Examiner's resort to the specification imparts a meaning to "tangentially" that is virtually boundless and violates the rules under which Examiners may look to the specification to derive a meaning other than the ordinary meaning of a claim term. As stated in MPEP 2111.II., an Examiner must apply the ordinary meaning to a claim term, in this case "tangentially," which appellant agrees means "touching at one point but not intersecting," unless the specification sets forth a different definition for the term or otherwise restricts its meaning. There is nothing in the specification to support the Examiner's failure to use the agreed ordinary meaning of "tangentially." The specification of this application discloses that it is essential that the flow be directed in a substantially tangential direction. If the flow is not directed tangentially as claimed, the fluid within the vessel will not be induced to swirl, and will not thereby create the vortex as disclosed throughout the specification as being characteristic of the water flow in

accordance with the invention. Furthermore, the Examiner's approach assumes that the drawings in this application, not the words of the claims, define the invention. The drawings of a patent application are ordinarily illustrative of the invention and do not, except in the case of means-plus-function claims under 35 USC 112, sixth paragraph, directly limit the claims. The drawings of this application clearly show in each case the formation of vortex 10 by the tangential introduction of water through inlet or fill port 6.

The Examiner also misconstrued the requirement of the claims that the controller of the claimed water feature control "the rate of water inlet *in comparison to the rate of water outlet* so as to vary the height of the volume of water in the vessel." This limitation requires the controller to be so constructed that it compares the rate at which water flows into the tubes of the water feature with the rate at which the water flows out of the tubes, using this comparison to control the height of the water in each of the tubes.

C. Hess Discloses A Simple Water Clock, Not The Dynamic Water Feature Of Claims 1-4 And 7.

Hess does not identically disclose or even suggest a water feature as claimed in claim 1 but instead discloses a simple water clock in which the time is indicated by the heights of a plurality of static water columns, which Hess terms time keeping reservoirs.

Hess's device does not possess any structure that "control[s] the rate of water inlet in comparison with the water outlet rate so as to vary the height of the volume of the vessel." Instead, the tubes fill one by one to their full heights to show the passage of time minute by minute, without any control by reference to water inflow and outlet rates, and do not show time as claimed in dependent claims 2-4 and 7 by the varying height of the water in the body of the device as claimed. Although the Examiner contends that Hess discloses "timer 44-48 for controlling the rate of water inlet in comparison with the water outlet rate so as to vary the height of the volume in the vessel," the explanation in Hess of how the passage of time is determined in columns 3, line 34, through column 4, line 60, demonstrates that the tubes of Hess simply fill

with water until the weight of the tube filling with water reaches a predetermined point, at which the filling ceases. There is no disclosure in Hess of any structure that controls water height in a vessel by comparing the inflow and outflow rates of the water.

Hess's inlet 32, furthermore, is not arranged tangentially to the body 38. Hess's FIG. 4 instead shows that the inlet 32 (called discharge tube 32 by Hess) is arranged so that its mouth (at the lower end of the discharge tube 32) lies centrally of the upper end of the body 38 and not tangentially as required by claim 1. The inlet of Hess, as can be seen from Fig. 1 of Hess, is radial to the vessel, not tangential. Hess's discharge tubes 30 and 34 likewise are not arranged tangentially to the body of the device. As a result, the structure disclosed in Hess is not configured so as to impart rotational movement to the volume of water. In Hess, the water inlet connection can be at any convenient orientation because the direction of flow is not important. Since in this context "radial" and "tangential" are essentially opposite to one another in meaning, no person of ordinary skill in this art would consider Hess to disclose the tangentially disposed inlet as claimed.

For all of these reasons, Hess does not identically disclose (or suggest) the invention of claims 1-4 and 7, so the rejection of claims 1-4 and 7 as anticipated by Hess should be reversed.

D. Sonnweber Does Not Identically Disclose Or Suggest The Water Feature Invention Of Claims 1, 5 and 6.

Sonnweber discloses a simple, static water feature having a cylindrical vessel 1 which stands in a reservoir 3. A pump 6 forces water into the vessel 1 via tangential inlet 5 so that a vortex 2 is formed in the vessel 1. However, in contrast to the Examiner's suggestion, Sonnweber does not disclose a "controller" for varying the height of the vortex 2 in the vessel 1 or that such a controller should have a structure such that it compares the rate of water inflow against water outflow. Sonnweber simply teaches that the flow rate of the pump 6 (not "controller 6" as asserted by the Examiner) should be selected such that the vortex 2 fills the vessel 1. Sonnweber also states that, if additional water is provided in the vessel 1, the water

will simply overflow the vessel 1 and fall back into the reservoir 3. There is no disclosure or suggestion, implicit or explicit, that the flow rate of the pump can be, or is, controlled in a manner which allows the height of the vortex 2 to be varied in the vessel 1 once the preferred height has been selected. Furthermore, there is nothing in Sonnweber that discloses a controller that determines the rate of water inflow in comparison with a rate of water outflow. There is no disclosure in Sonnweber of water outflow at all, and nothing in the final Action points to such a disclosure.

For all of these reasons, Sonnweber does not identically disclose (or suggest) the invention of claims 1, 5 and 6, so the rejection of claims 1, 5 and 6 as anticipated by Sonnweber should be reversed.

E. Koenig Does Not Identically Disclose Or Suggest The Water Feature Invention Of Claim 8 Or The Method Of Claims 16-19.

This rejection is a bit odd. As the Board will note, claim 8 is a dependent water feature claim, while claims 16-19 are method claims. If, as the Examiner contends, Koenig identically anticipates claim 8, which adds a further vessel to the vessel of claim 1, it makes no sense that the Examiner failed to apply Koenig to claim 1. Koenig does not, as appellant will show, anticipate either claim 1 or claim 8. The final Action does not explain how Koenig discloses the method steps of claims 16-19, so it is not clear what the Examiner's rationale for rejection is. Nonetheless, appellant will explain why Koenig does not disclose the method of claims 16-19, either.

The disclosure in Koenig relates to a water basin which is specially shaped to have a reducing cross-section and a tangential inlet. Water is allowed to flow into the basin under gravity. A vortex is created by the water swirling in the basin. The height of the vortex builds up and, at a critical point, the vortex collapses. This effect therefore relies upon the attaining of an unstable condition to achieve the desired effect. Koenig does not disclose a controller which varies the height of the vortex. Indeed, there is no disclosure of any sort of variation in or

controlling of the flow rate of the incoming water. Indeed, Koenig teaches the exact opposite of this invention, which is the controlled variation of the height of a rotating volume of water.

Koenig is in the German language; the Examiner seems to have relied on the English-language abstract. This abstract describes Koenig's apparatus as a "swirling pool for generating an unstable vortex in liquids." Although the abstract of Koenig refers to a tangential inflow and central outflow, much as claimed by appellant, Koenig departs entirely from what appellant claims by indicating that the height of the vortex is not controlled by reference to the rates of inflow and outflow of water as claimed, but instead refers to "[t]he constantly inflowing liquid [being] initially held up above the outflow by the centrifugal force but then yields to the force of gravity, so that the vortex collapses and the pool empties completely." This is not a disclosure of controlling vortex height by comparing water inflow and outflow rates as claimed; instead, Koenig is referring to the physical locations of the inflow and outflow. Furthermore, appellant's controller acts to produce a vortex of controllable height and not the unstable vortex disclosed in Koenig.

Even the Examiner's statement of rejection seems to recognize Koenig's deficiencies in this regard by stating that the controller he thinks is disclosed in col. 1, lines 1-60, of Koenig "control[s] the rate of water inlet to vary the height of [the] water volume," i.e., conceding that Koenig does not disclose comparing water inflow with outflow to control the height of the water volume. Saying, as the Examiner does, that column 1, lines 1-60, of Koenig discloses a controller shows that the Examiner is not relying on what Koenig says, but only on the abstract, which falls far short of appellant's invention.. Column 1, lines 3-61, is in fact the entirety of Koenig's disclosure, but it does not, from what the undersigned (who can read German) can see in its disclosure, say a word about any "controller." Column 1, lines 58-61, refers to a flow rate of 40 liters per minute, but does not mention comparison of inflow and outflow rates to control the height of the vortex as claimed.

For all of these reasons, Koenig does not identically disclose (or suggest) the invention of claims 8 and 16-19, and the rejection of claims 8 and 16-19 as anticipated by Koenig should be reversed.

CONCLUSION

For the foregoing reasons, appellant respectfully requests the Board to reverse the final rejections of claims 1-8 and 16-19.

In the event that the transmittal letter is separated from this document and the Patent and Trademark Office determines that an extension and/or other relief is required, appellant petitions for any required relief including extensions of time and authorizes the Commissioner to charge the cost of such petitions and/or other fees due in connection with the filing of this document to **Deposit Account No. 03-1952** referencing 532412000100.

Dated: September 8, 2005

Respectfully submitted,

By: _____

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CLAIMS APPENDIX

Appellant reproduces herein finally rejected claims 1-8 and 16-19, on appeal before the Board. Claims 9-15 and 20 are allowed or allowable and are not reproduced below.

1. A water feature comprising a vessel for containing a volume of water and having a body, a water inlet and a water outlet, the water inlet being arranged substantially tangentially to the body of the vessel so as to impart rotational movement to the volume of water when water is introduced thereto, and a controller for controlling the rate of water inlet in comparison to the rate of water outlet so as to vary the height of the volume of water in the vessel.

2. A water feature as claimed in claim 1, further comprising a timing device in association with the controller so that the height of the volume of water in the vessel can be varied over a predetermined period of time.

3. A water feature as claimed in claim 2, wherein the timing device is adapted to vary the height of the volume of water in the vessel between a minimum height and a maximum height over a predetermined period of one hour.

4. A water feature as claimed in claim 1, further comprising a sump with which the water inlet and water outlet of the vessel communicate, the sump comprising a vent to allow air travelling along the water outlet to be vented in preference to entering the water inlet.

5. A water feature as claimed in claim 1, wherein the water outlet has a drain port and a downstream portion, the downstream portion having a diameter which is greater than that of the drain port.

6. A water feature as claimed in claim 1, wherein an airtight lid is provided on the upper end of the vessel body to prevent water overflow therefrom.

7. A water feature as claimed in claim 1, wherein the body of the vessel comprises a cylindrical tube having a circular cross-section.

8. A water feature as claimed in claim 1, further comprising a further vessel which is arranged coaxially with the vessel, the further vessel having a body, a water inlet and a water

outlet and a controller for controlling the rate of water inlet in comparison to the rate of water outlet so as to vary the height of the volume of water in the further vessel.

16. A method of operating a water feature comprising at least one vessel containing a volume of water, comprising the steps of:

(a) causing the volume of water to rotate about an axis of the vessel so as to form a vortex therein; and

(b) causing the volume of water to vary in height over time.

17. A method as claimed in claim 16, wherein water is continuously introduced to and drained from the vessel, the rate of introduction exceeding the rate of draining when the height of the water volume is increasing and the rate of draining exceeding the rate of introduction when the height of the water volume is decreasing.

18. A method as claimed in claim 17, wherein air is introduced to or removed from the vessel via an outlet of the vessel as the height of the volume of water is varied.

19. A method as claimed in claim 16, wherein the rotating volume of water is caused to vary in height over a predetermined period of time so as to provide, by its height, an indication of the time.

EVIDENCE APPENDIX

[NONE.]

RELATED PROCEEDINGS APPENDIX

[NONE.]